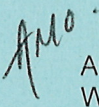


STATE OF NEW HAMPSHIRE INTER-DEPARTMENT COMMUNICATION

FROM:  Andrew O'Sullivan
Wetlands Program Manager

DATE: July 9th, 2019

AT (OFFICE): Department of
Transportation

SUBJECT Dredge & Fill Application
Monroe, 42411

**Bureau of
Environment**

TO Collis Adams, Wetlands Bureau Administrator
Craig Rennie, Inland Wetland Supervisor
New Hampshire Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by NH DOT Bureau of Bridge Maintenance for the subject major impact project. This project is classified as major per Env-Wt 303.02(p). The project is located on NH Route 135 in the Town of Monroe, NH. The proposed work consists of rehabilitating a 17' span concrete slab bridge by extending the bridge abutment and constructing a new wingwall at the outlet to stabilize the structure.

This project was reviewed at the Natural Resource Agency Coordination Meeting on December 19, 2018. A copy of the minutes has been included with this application package. A copy of this application and plans can be accessed on the Departments website via the following link:
<http://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/wetland-applications.htm>

Mitigation for this project will consist of a single and one time in-lieu fee payment into the ARM fund in the amount of \$12,631.68 for a total of 51 LF of stream channel and bank impacts at the NE quadrant of the bridge.

The lead people to contact for this project are Steve Johnson, Administrator, Bureau of Bridge Maintenance (271-3668 or steve.johnson@dot.nh.gov) or Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment (271-3226 or Andrew.O'Sullivan@dot.nh.gov).

A payment voucher has been processed for this application (Voucher #575196) in the amount of \$301.40.

If and when this application meets with the approval of the Bureau, please send the permit directly to Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment.

AMO:sel
Enclosures

cc:
BOE Original
Town of Monroe (4 copies via certified mail)
David Trubey, NH Division of Historic Resources (Cultural Review Within)
Connecticut River Riverbend Local Advisory Subcommittee (via certified mail)
Carol Henderson, NH Fish & Game (via electronic notification)
Maria Tur, US Fish & Wildlife (via electronic notification)
Mark Kern, US Environmental Protection Agency (via electronic notification)
Michael Hicks, US Army Corp of Engineers (via electronic notification)
Kevin Nyhan, BOE (via electronic notification)

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WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau Land Resources Management

Check the status of your application: www.des.nh.gov/onestop



RSA/Rule: [RSA 482-A/ Env-Wt 100-900](#)

Administrative Use Only	Administrative Use Only	Administrative Use Only	Filing No. Check No. Amount Date
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1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to [Guidance Document A](#) for instructions.

☒ Standard Review (Minimum, Minor or Major Impact)

☐ Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required, a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if mitigation is required, please refer to the [Determine if Mitigation is Required Frequently Asked Questions](#).

Mitigation Pre-Application Meeting Date: Month: 12 Day: 19 Year: 2018

☐ N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: **NH 135 over Roaring Brook**

TOWN/CITY: **Monroe**

TAX MAP:

BLOCK:

LOT:

UNIT:

USGS TOPO MAP WATERBODY NAME: **Roaring Brook**

☐ NA

STREAM WATERSHED SIZE: **4.66 sq. mi.**

☐ NA

LOCATION COORDINATES (If known): **44°17'26.5" 72°2'26.6"**

☐ Latitude/Longitude ☐ UTM ☐ State Plane

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

The proposed work includes the rehabilitation of a 17' span concrete slab bridge carrying NH 135 over Roaring Brook. The work will include constructing a new wingwall to stabilize the structure.

5. SHORELINE FRONTAGE:

☐ N/A This does not have shoreline frontage.

SHORELINE FRONTAGE:

Shoreline Frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line ([Env-Wt 101.89](#)).

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application.

To determine if other Land Resources Management Permits are required, refer to the [Land Resources Management Webpage](#).

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Individual Sewerage Disposal per RSA 485-A:2	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Subdivision Approval Per RSA 485-A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Shoreland Permit Per RSA 483-B	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the [Instructions & Required Attachments](#) document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB 18 - 3758.


b. ☐ This project is within a [Designated River](#) corridor. The project is within ¼ mile of: Connecticut River; and date a copy of the application was sent to the [Local River Management Advisory Committee](#): Month: Day: Year:

☐ N/A - This project is not within a Designated River corridor.

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

8. APPLICANT INFORMATION (Desired permit holder)			
LAST NAME, FIRST NAME, M.I.: NH Dept. of Transportation			
TRUST / COMPANY NAME: NH Dept. of Transportation		MAILING ADDRESS: PO Box 483	
TOWN/CITY: Concord		STATE: NH	ZIP CODE: 03302
EMAIL or FAX: Steve.Johnson@dot.nh.gov		PHONE: 271-3667	
ELECTRONIC COMMUNICATION: By initialing here: <u> SJ </u> , I hereby authorize NHDES to communicate all matters relative to this application electronically.			
9. PROPERTY OWNER INFORMATION (If different than applicant)			
LAST NAME, FIRST NAME, M.I.: NH Dept. of Transportation			
TRUST / COMPANY NAME: NH Dept. of Transportation		MAILING ADDRESS: PO Box 483	
TOWN/CITY: Concord		STATE: NH	ZIP CODE: 03302
EMAIL or FAX: Sarah. Large@dot.nh.gov		PHONE: 271-3226	
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.			
10. AUTHORIZED AGENT INFORMATION			
LAST NAME, FIRST NAME, M.I.:		COMPANY NAME:	
MAILING ADDRESS:			
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL or FAX:		PHONE:	
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.			
11. PROPERTY OWNER SIGNATURE:			
See the Instructions & Required Attachments document for clarification of the below statements			
By signing the application, I am certifying that:			
<ol style="list-style-type: none"> 1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application. 2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document. 3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900. 4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type. 5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative. 6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47. 7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for National Historic Preservation Act (NHPA) 106 compliance. 8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project. 9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate. 10. I understand that the willful submission of falsified or misrepresented information to the NHDES is a criminal act, which may result in legal action. 11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining. 12. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not forward returned 			
 Property Owner Signature		Steve W. Johnson Print name legibly	7/3/2019 Date

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

	Print name legibly	Date
--	--------------------	------

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will be reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

	Print name legibly	Town/City	Date
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DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3, I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact.

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.

Intermittent Streams: linear footage distance of disturbance is measured along the thread of the channel.

Perennial Streams/ Rivers: the total linear footage distance is calculated by summing the lengths of disturbance to the channel and each bank.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.	TEMPORARY Sq. Ft. / Lin. Ft.
Forested wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Scrub-shrub wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Emergent wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Wet meadow	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Intermittent stream channel	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Perennial Stream / River channel	49 / 27 <input type="checkbox"/> ATF	844 / 62 <input type="checkbox"/> ATF
Lake / Pond	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Intermittent stream	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Perennial stream / River	352 / 24 <input type="checkbox"/> ATF	262 / 31 <input type="checkbox"/> ATF
Bank - Lake / Pond	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Tidal water	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Salt marsh	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Sand dune	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland buffer	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Undeveloped Tidal Buffer Zone (TBZ)	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Previously-developed upland in TBZ	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - Lake / Pond	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - River	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - Tidal Water	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Vernal Pool	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
TOTAL	401 / 51	1106 / 93

15. APPLICATION FEE: See the [Instructions & Required Attachments](#) document for further instruction

☐ Minimum Impact Fee: Flat fee of \$ 200

☐ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) 1507 sq. ft. X \$0.20 = \$ 301.40

Temporary (seasonal) docking structure: sq. ft. X \$1.00 = \$

Permanent docking structure: sq. ft. X \$2.00 = \$

Projects proposing shoreline structures (including docks) add \$200 = \$

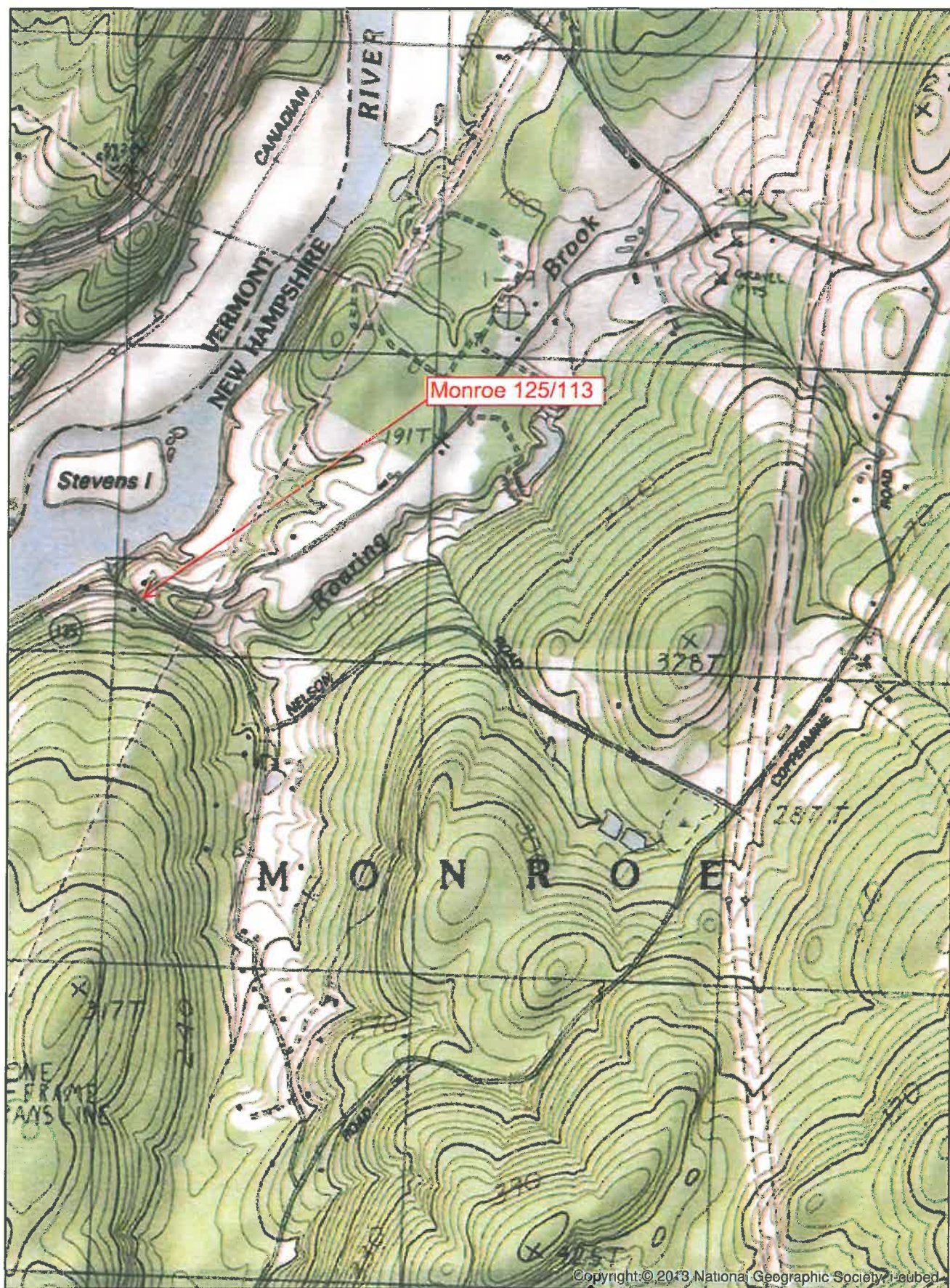
Total = \$ 301.40

The Application Fee is the above calculated Total or \$200, whichever is greater = \$ 301.40

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov



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Miles

1:24,000



WETLANDS PERMIT APPLICATION – ATTACHMENT A MINOR AND MAJOR - 20 QUESTIONS

Land Resources Management

Wetlands Bureau

Check the Status of your application: www.des.nh.gov/onestop



RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The existing bridge carrying NH 135 over Roaring Brook has been experiencing erosion along the northeast bank of the river. The current condition of the bank needs to be stabilized to keep the bridge safe. It is necessary to impact jurisdictional areas in order to make the repairs. The impacts are for the temporary construction areas, extending the abutment and constructing a new wingwall along the NE quadrant, as well as re-installing riprap along the NE bank.

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

The alternatives considered are as follows:

Replace the structure with a new structure in compliance with the NH Stream Crossing Guidelines: According to the NH Stream Crossing Guidelines, if a new structure were to be constructed at this location it would require a span of 34'-0". A structure of this size would cost approximately \$700,000. Spending this much money on a structure that could be adequately preserved for approximately \$150,000 would not be a practicable use of resources.

Install concrete wingwall and place riprap: This is the preferred alternative because it is the most effective way to repair and provide the necessary erosion protection this bridge needs. The project as proposed has an estimated cost of \$150,000. This is the most cost-effective solution and meets the stream crossing rules to the maximum extent practicable.

In the December 2018 Natural resource Agency Coordination Meeting no concerns with opting to do this alternative were raised. The resource agencies require mitigation with respect to the construction of the wingwall within the wetland areas.

3. The type and classification of the wetlands involved.

**R2RB1: Riverine, lower perennial, rock bottom, bedrock
Bank**

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

Roaring Brook flows into the Connecticut River shortly after the NH 135 crossing.

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

Roaring Brook has not been identified as a rare surface water.

6. The surface area of the wetlands that will be impacted.

893 sq. ft. Riverine (49 sq. ft. permanent, 844 sq. ft. temporary)

614 sq. ft. Bank (352 sq. ft. permanent, 262 sq. ft. temporary)

7. The impact on plants, fish and wildlife including, but not limited to:

- a. Rare, special concern species;
- b. State and federally listed threatened and endangered species;
- c. Species at the extremities of their ranges;
- d. Migratory fish and wildlife;
- e. Exemplary natural communities identified by the DRED-NHB; and
- f. Vernal pools.

a) the Natural Heritage Bureau (NHB) did not have any record of species of special concern close to the project limits.

b) The US Fish and Wildlife Services (USFWS) IPaC tool identified the Northern Long-eared Bat (NLEB), a federally listed threatened species, as a species that may be present within the bounds of the project area. A streamlined 4(d) Rule consultation and determination key was completed and submitted to the USFWS New England Field Office to notify the USFWS of the project and describe the activities that are accepted from incidental take prohibitions. The streamlined 4(d) Rule consultation indicated that the project adheres to the conditions of the NLEB 4(d) Rule and the project's Section 7 consultation requirements are satisfied by submission of the form in accordance with the January 5, 2016, Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB. The project would not result in any prohibited take of NLEB.

c) There are no species known to be at the extremities of their ranges located in the project area.

d) Migratory fish and wildlife will not be affected by this project.

e) The Department has coordinated with DRED and results of the NHB review revealed there was no record.

f) There were no vernal pools identified and/or delineated in the project area.

8. The impact of the proposed project on public commerce, navigation and recreation.

During construction all lanes of traffic will be maintained at all times. Roaring Brook is a non-navigable water which makes it non-conductive to boaters. There are no recreational areas that have been identified in this area except for the possibility for fishing. During construction, fishing activities from the banks of the brook will need to occur outside of the construction work zone. When construction is completed the project as proposed will be a benefit to the public commerce as it will provide a long lasting struture supporting the traveling public.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The project will not significantly interfere with the aesthetic interests of the general public. The proposed improvements will most likely go unnoticed as the work will primarily be performed down slope of the roadway and out of view to the general public.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

The project will not interfere with or obstruct public rights of passage or access. During construction, traffic will be maintained at all times.

11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

The project is expected to have a positive impact on abutting properties. The rehabilitated structure will better serve the abutting properties if they need to travel on the road.

The project as proposed including the installation of riprap and wingwall construction will not alter the chance of flooding on the abutting properties.

12. The benefit of a project to the health, safety, and well being of the general public.

This project will provide a safer, longer lasting structure and roadway. If the structure is not rehabilitated, the bridge will eventually be load posted or closed. Keeping the roadway open benefits commerce, trade, emergency access, etc., for the general public.

13. The impact of a proposed project on quantity or quality of surface and groundwater. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

The surface water currently runs off the road and over natural vegetation before entering the brook. Upon completion of the project, surface water will drain in the same manner. This will have no adverse effects on the quality or quantity of surface and groundwater. Best Management Practices will be used to prevent any adverse effect to water quality during construction.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

Flooding: The bridge is not located within a mapped flood plain and the proposed work will not increase upstream or downstream flood levels.

Erosion: Placing riprap and adding a new wingwall is intended to prevent any further erosion. The intent of this project is to stabilize the structure's bank.

Sedimentation: The proposed project will not be a barrier to sediment transport nor change the brook's natural sedimentation characteristics.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

Surface water will not be reflected or redirected as a result of this project. Roaring Brook does not have enough water for wave energy to be an issue.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

The work consists of the repair of an existing bridge structure. There are no similar structures in the vicinity owned by other parties that would require repair.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The project has minimized overall impacts and will not impact the values and functions of Roaring Brook. Roaring Brook will continue to convey water from higher elevation to lower elevation and provide habitat to aquatic and terrestrial organisms.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

The project is not located in or near any Natural Landmarks listed on the National Register.

19. The impact upon the value of areas named in acts of Congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

The proposed project is not within any areas named in acts of Congress or presidential proclamations.

20. The degree to which a project redirects water from one watershed to another.

The project as proposed will not redirect water from one watershed to another.

Additional comments

NOTES ON CONFERENCE:**Finalize November 21, 2018 meeting minutes.**

Matt Urban indicated that comments and edits regarding the November 21st Natural Resource Agency meeting minutes had come in from several people* and that he would like to finalize the minutes with those edits incorporated into them. The group agreed. The minutes were finalized and posted subsequent to the meeting.

**Gino Infascelli, Amy Lamb, Carol Henderson, Jon Hebert, John Magee, Chris Carucci, Pete Walker, Wendy Johnson, and Lori Sommer all commented on the minutes.*

Monroe, #42411

Doug Locker provided an overview of the project. The project is the rehabilitation of an existing bridge, Monroe 125/113, carrying NH 135 over Roaring Brook. The existing bridge is an existing concrete slab with a 17' span and was constructed in 1933 and rebuilt in 1980. The drainage basin at this location was stated to be 4.66 square miles, and the NHB report was cited as having no record. It was also noted the site had knotweed present, but we would not be impacting that area. It was presented that the proposed work would include stabilizing the northeast bank by adding riprap and constructing a new wingwall. Photos were shown of the site and structure including images that showed how the existing structure had experienced scour and erosion.

Mike Hicks asked if there would be any tree clearing for this project, and Doug Locker said there was no need. Mike also asked if a cultural review would be done. Matt Urban said the cultural review would be completed by Bureau of Environment.

It was agreed that there was a need for mitigation for this project with regards to the length of the new wing along both the channel and the bank on the northeast quadrant.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Dixville, #42398

Doug Locker provided an overview of the project. The project is the rehabilitation of the bridge, Dixville 206/101 carrying NH 26 over Flume Brook. This bridge is a concrete arch that spans 15' and has a drainage basin of 10.32 sq. miles. The NHB was cited as having a record but not expected to be impacted. The proposed work was stated to be repair to the wingwalls and centerline joint requiring temporary impacts, riprap needed to stabilize the southern bank, and a toe wall to prevent further undermining of the southern abutment.

Mike Hicks advised that the bridge should be cleared through historic review. The cultural resources program in the Bureau of Environment will review the project. M. Hicks asked if any trees will be cleared. D. Locker advised that no trees would be cleared.

Bridge 206/101 is the northern of the two crossings under NH Route 26 on the topographic map presented.

The bridge database had listed the bridge as crossing Clear Stream which is essential fish habitat, however through further review it was determined that the bridge crosses Flume Brook. This correction was mentioned by Gino Infascelli in the meeting and later confirmed by Sarah Large. M. Hicks indicated that if the stream is actually Flume Brook an EFH assessment would not be needed since Flume Brook is not listed as EFH.

Mitigation Narrative

The proposed work permanently impacts 27 LF of channel and 24 LF of bank of right for the extension and installation of a new concrete wingwall at the outlet river right side. At the December 19, 2018 Natural Resource Agency meeting mitigation was discussed and it was agreed that the length of new wing along both the channel and bank on the northeast quadrant would need to be mitigated for. The Department proposes to pay a onetime in-lieu fee payment of \$12, 631.68 to the DES Aquatic Restoration Mitigation (ARM) fund.

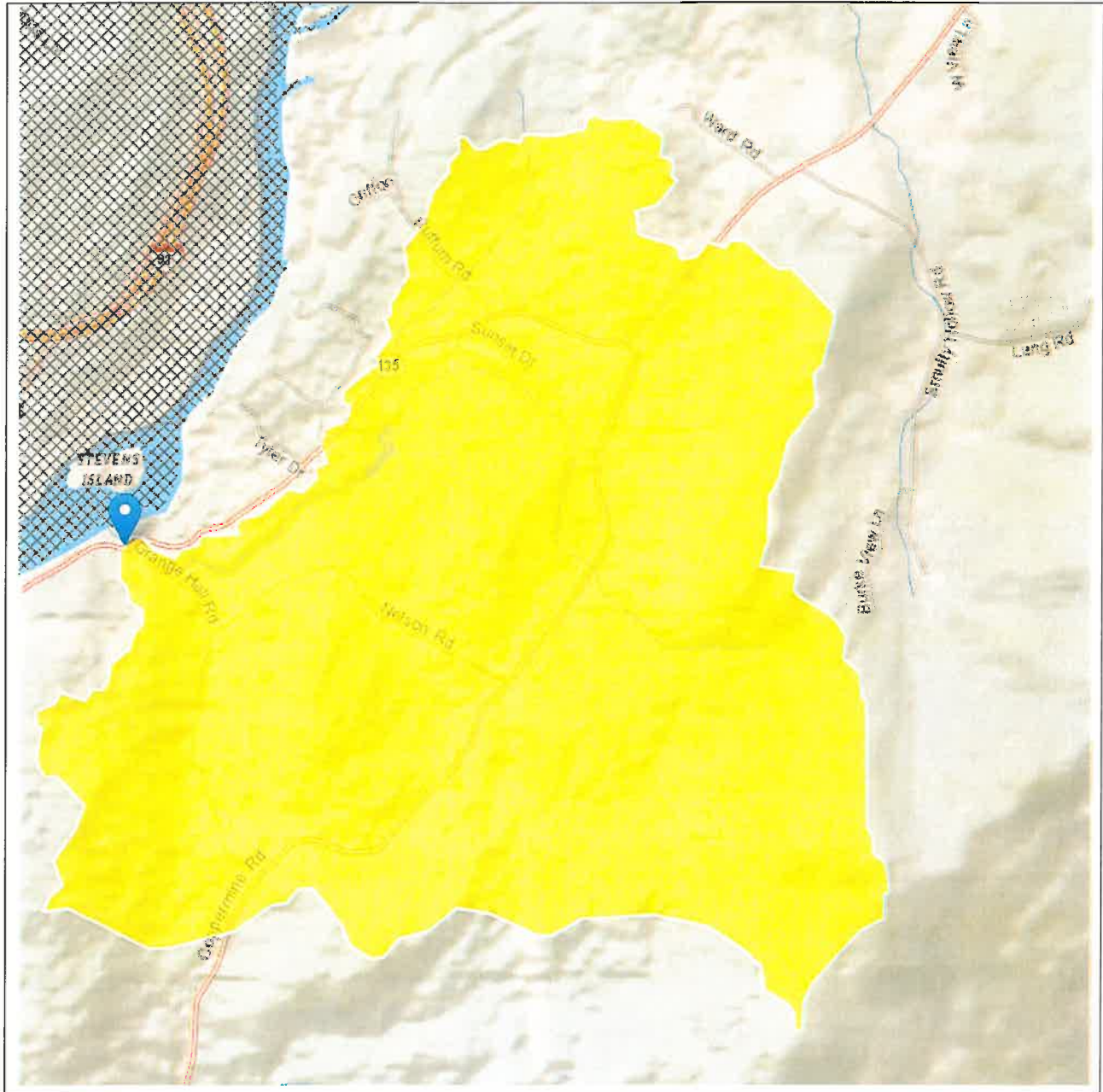
NHDES AQUATIC RESOURCE MITIGATION FUND STREAM PAYMENT CALCULATION		
INSERT LINEAR FEET OF IMPACT on BOTH BANKS AND CHANNEL	Right Bank	24.00
	Left Bank	
	Channel	27.0000
	TOTAL IMPACT	51.0000
	Stream Impact Cost:	\$10,526.40
	NHDES Administrative cost:	
		\$2,105.28
***** TOTAL ARM FUND STREAM PAYMENT*****		
\$12,631.68		

Hydraulic Data

Drainage Area – 4.66 square miles

Flow – Q 100 = 615 cfs

The proposed structure will pass the 100 year flood.



Watershed Boundaries Map

**NH Department of Transportation
Bureau of Bridge Maintenance
Project, #42411
Env-Wt 904.09 Alternative Design
TECHNICAL REPORT**

Env-Wt 904.09(a) - If the applicant believes that installing the structure specified in the applicable rule is not practicable, the applicant may propose an alternative design in accordance with this section.

Please explain why the structure specified in the applicable rule is not practicable (Env-Wt 101.69 defines practicable as *available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes.*)

Roaring Brook has a drainage area of 4.66 square miles which qualifies this stream as a Tier 3 crossing. The required span for a compliant crossing in accordance with the NH Stream Crossing Guidelines and based on the regional hydraulic curve calculation would be 34'. A structure of this size would cost approximately \$700,000. Spending this much money on a structure that could be adequately preserved for approximately \$150,000 would not be a practicable use of resources.

The proposed alternative meets the specific design criteria for Tier 2 and Tier 3 crossings to the *maximum extent practicable*, as specified below.

Env-Wt 904.05 Design Criteria for Tier 2 and Tier 3 Stream Crossings – New Tier 2 stream crossings, replacement Tier 2 crossings that do not meet the requirements of Env-Wt 904.07, and new and replacement Tier 3 crossings shall be designed and constructed:

(a) In accordance with the NH Stream Crossing Guidelines.

The proposed improvements have been developed in accordance with the NH Stream Crossing Guidelines. The Department has considered numerous design alternatives based on general considerations that take the geomorphic conditions of the stream into account as it relates to the structure. The Department has collected data in the field and in the office to aid in the design of the proposed crossing. Using information that was available the Department has determined that a full bridge replacement would not be practicable. As such, the Department proposed an alternative design that meets the intent of the stream crossing guidelines to maximum extent practicable.

(b) With bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the stream crossing.

The proposed project will not significantly change the existing waterway opening and structure alignment, and therefore, it will not change the depths or velocities at the crossing. The proposed alternative, although not an upgrade, does not diminish the existing conditions at the crossing.

(c) To provide a vegetated bank on both sides of the watercourse to allow for wildlife passage.

The existing structure does not have banks through the bridge, nor will it after the repair. The banks abutting both sides of Roaring Brook are currently vegetated. It is not possible to vegetate with shrubs/woody vegetation on the banks immediately in front of critical sections of infrastructure, such as wing walls because over time as large vegetation grows in and around riprap their roots and the possibility of treefalls can threaten the integrity of the riprap.

(d) To preserve the natural alignment and gradient of the stream channel, so as to accommodate natural flow regimes and the functioning of the natural floodplain.

The natural alignment and gradient of the stream channel will not be changed as a result of this project.

(e) To accommodate the 100-year frequency flood, to ensure that (1) there is no increase in flood stages on abutting properties; and (2) flow and sediment transport characteristics will not be affected in a manner which could adversely affect channel stability.

The project as proposed will not alter the chance of flooding on abutting properties. The existing and proposed repair to the structure will continue to pass the 100 year flood flow. Sediment transport characteristics will not change as a result of the repairs.

(f) To simulate a natural stream channel.

The majority of the stream channel under the structure is currently a natural bottom. The riprap added here is only to improve upon the armoring of the substructure and will not be placed throughout the entire width of the channel through the structure.

(g) So as not to alter sediment transport competence.

Sediment transport competence will not be changed as a result of this project.

Env-Wt 904.09(c)(3) – The alternative design must meet the general design criteria specified in Env-Wt 904.01:

Env-Wt 904.01

(a) Not be a barrier to sediment transport;

Nothing that will be a barrier to sediment transport will be installed in this project.

(b) Prevent the restriction of high flows and maintain existing low flows;

High flows will not be restricted and low flows will be maintained as a result of this project. The project as proposed will not have any effect on the structures ability to pass the 100 year storm event.

(c) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction;

The movement of aquatic life indigenous to the water body will not change as a result of this project.

(d) Not cause an increase in the frequency of flooding or overtopping of banks;

The project as proposed will have no effect on the hydraulic capacity of the structure. High flows will not be restricted. The frequency of flooding or water overtopping the roadway or banks at the structure will not change due to the proposed work.

(e) Preserve watercourse connectivity where it currently exists;

Connectivity will not be changed as a result of this project.

(f) Restore watercourse connectivity where: (1) Connectivity previously was disrupted as a result of human activity(ies); and (2) Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;

The watercourse is currently connected and the proposed work will not change this as a result of this project. Aquatic life passage upstream or downstream of the crossing will not be affected as a result of this project.

(g) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and

The project will not cause erosion, aggradation, or scouring upstream or downstream of the crossing. The placed riprap is intended to prevent scour along banks of the water body and at the wingwall to prevent excessive sediment transport and erosion in the future.

(h) Not cause water quality degradation.

The project as proposed will not impact the quantity or quality of surface and/or groundwater at this site. Storm water and surface water runoff will continue to sheet flow to the water body off the road and banks the way it does currently. Best Management Practices will be used to prevent any adverse effect to the water quality during construction.

*****Note: An alternative design for Tier 1 stream crossings must meet the general design criteria (Env-Wt 904.01) only to the *maximum extent practicable*.**



New Hampshire Natural Heritage Bureau

To: Douglas Locker
7 Hazen Drive
Concord, NH 03302

Date: 12/7/2018

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 12/7/2018

NHB File ID: NHB18-3758

Applicant: Steve Johnson

Location: Tax Map(s)/Lot(s):
Monroe

Project Description: This project is the rehabilitation of the bridge carrying NH 135 over Roaring Brook. This work will include reconstructing a wingwall.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

This report is valid through 12/6/2019.



MAP OF PROJECT BOUNDARIES FOR NHB FILE ID: NHB18-3758





United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>



In Reply Refer To:

July 02, 2019

Consultation Code: 05E1NE00-2019-SLI-2174

Event Code: 05E1NE00-2019-E-05486

Project Name: Monroe 42411 (Br. 125/113)

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2019-SLI-2174

Event Code: 05E1NE00-2019-E-05486

Project Name: Monroe 42411 (Br. 125/113)

Project Type: TRANSPORTATION

Project Description: The proposed work includes the rehabilitation of a 17' span concrete slab bridge carrying NH 135 over Roaring Brook. The work will include constructing a new wingwall to stabilize the structure.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/44.29017781162783N72.04071970390186W>



Counties: Grafton, NH

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME

STATUS

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
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70 Commercial Street, Suite 300
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Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>

IPaC Record Locator: 322-17285435

July 02, 2019

Subject: Consistency letter for the 'Monroe 42411 (Br. 125/113)' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Sarah Large:

The U.S. Fish and Wildlife Service (Service) received on July 02, 2019 your effects determination for the 'Monroe 42411 (Br. 125/113)' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"^[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to iPaC the following name and description for the subject Action.

1. Name

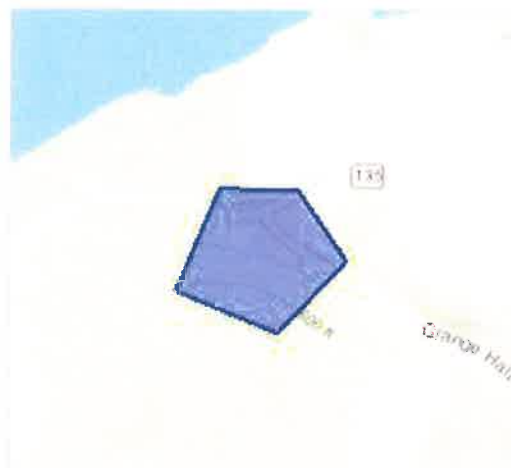
Monroe 42411 (Br. 125/113)

2. Description

The following description was provided for the project 'Monroe 42411 (Br. 125/113)':

The proposed work includes the rehabilitation of a 17' span concrete slab bridge carrying NH 135 over Roaring Brook. The work will include constructing a new wingwall to stabilize the structure.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/44.29017781162783N72.04071970390186W>

**Determination Key Result**

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in iPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Will your activity purposefully **Take** northern long-eared bats?

No

3. Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

6. Will the action involve Tree Removal?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

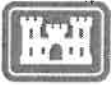
9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0



US Army Corps
of Engineers®
New England District

U.S. Army Corps of Engineers
New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See PGP, GC 5 regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org , specifically the book <u>Natural Community Systems of New Hampshire</u> .		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	2606 sq. ft.	
2.7 What is the size of the proposed impervious surface area?	2631 sq. ft.	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	41%	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)		X
3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm . • Data Mapper: www.granit.unh.edu . • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html .	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	X	

4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		X
5. Historic/Archaeological Resources		
If a minor or major impact project, has a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) been sent to the NH Division of Historical Resources as required on Page 5 of the PGP?**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

Wetland Application – NHDOT Cultural Resources Review

For the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the US Army Corps of Engineers' *Appendix C*, and/or state regulation RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NHDOT Cultural Resources Program has reviewed the proposed project for potential impacts to historic properties.

Proposed Project: NH 135 over Roaring Brook, Extend abutment/bridge at NE quadrant of bridge (125/113) and construct a new wingwall and riprap bank. Associated with Drainage Basin 4.66 sq. miles (Tier 3)

Above Ground Review

Known/approximate age of structure: Br. 125/113, Concrete Slab Bridge spanning 17',
Constructed 1933, widened 9' in 1980 and the railings replaced

☒ **No Potential to Cause Effect/No Concerns**

Due to the limited nature of the impacts, the actions comply with **Appendix B, Activities with Minimal Potential to Cause Effects:**

9. Non-historic bridge and culvert maintenance, renovation, or total replacement, that may require minor additional right-of-way or easement, including:
a. replacement or maintenance of non-historic bridges

11. Stream and/or slope stabilization and restoration activities (including removal of debris or sediment obstructing the natural waterway, or any non-invasive action to restore natural conditions).

☐ Concerns:

Below Ground Review

Recorded Archaeological site: ☐ Yes ☒ No

Nearest Recorded Archaeological Site Name & Number: 27-GR-0209 (no name)

☒ Pre-Contact ☒ Post-Contact

Distance from Project Area:

1.55 miles (2.5 kilometers) southwest of project area

☒ **No Potential to Cause Effect/No Concerns**

As proposed activities will be confined to areas previously disturbed by bridge construction and maintenance and no new areas of excavation are proposed, there are no archaeological concerns.

☐ Concerns:

Reviewed by:

Sheila Charles *Julie Edin*

1/2/2019

NHDOT Cultural Resources Program Specialist/Archaeologist

Date:



UPSTREAM CHANNEL



LOOKING DOWNSTREAM THROUGH THE STRUCTURE



LOOKING AT THE STRUCTURE FROM SOUTH EAST BANK



LOOKING AT THE STRUCTURE FROM DOWNSTREAM



DOWNSTREAM CHANNEL



NORTHEAST WINGWALL



NORTHWEST BANK



NORTHEAST WINGWALL



NORTHEAST WINGWALL

CONSTRUCTION SEQUENCE

1. At normal to low flow the stream will be diverted to one side of the cofferdam.
2. The work zone will be dewatered or contained.
3. The concrete forming will be constructed and the wingwall will be placed at the northeast quadrant of the bridge.
4. Riprap will be placed at the northeast bank.
5. All dewatering devices will be removed and the site will be restored to its original quality.

Note: The Project will utilize BMP's from the Best Management Practices manual during all phases of construction.

Env-Wt 404 Criteria for Shoreline Protection

The rehabilitation of the bridge that carries Rte. 135 over Roaring Brook proposes the placement of stone fill within areas under the jurisdiction of the NH Wetlands Bureau and the US Army Corps of Engineers. The stone fill will be located in the channel and along the bank of the proposed structure as shown on the plans.

Pursuant to PART Wt 404 Criteria for Shoreline Stabilization, the following addresses each codified section of the Administrative Rules:

Wt 404.01 Least Intrusive Method

The riverbank stabilization treatment proposed is the least intrusive construction method necessary to minimize the disruption to the existing shorelines. The stone treatment can be reasonably constructed utilizing general highway construction methods.

Wt 404.02 Diversion of Water

Proposed roadway drainage will allow storm water run-off to be diverted so that it will flow over vegetated areas, insofar as possible, prior to entering Roaring Brook. This will minimize erosion of the shoreline.

Wt 404.03 Vegetative Stabilization

Natural vegetation will be left undisturbed to the maximum extent possible. The only locations being disturbed are the impacted areas on the plan for construction. All newly developed slopes and disturbed areas will have humus and seed applied for turf establishment, which will help stabilize the project area.

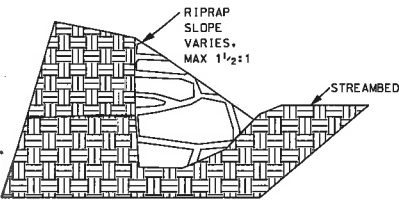
Wt 404.04 Rip-Rap

- (a) Stone fill, as proposed, is shown on the attached plans to protect the channel and bank as necessary. Stable embankments are necessary to maintain the structural integrity of the bridge during all flow conditions.
- (b) (1-5) The minimum and maximum stone size, the gradation, cross sections of the stone fill, proposed location, and other details have been provided on the attached plans. Bedding for the stone fill will consist of natural ground excavated to the proposed underside of the stone fill.
- (b) (6) Enclosed are plan sheets to sufficiently indicate the relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.
- (b) (7) Stone fill is recommended for the limits shown on the attached plans to protect the banks from erosion during flood flows, from scour during all flows, and slopes greater than 2:1 have difficulty supporting vegetation.
- (c) This project is not located adjacent to a great pond or water body where the state holds fee simple ownership.
- (d) Stone fill is proposed to extend down to and adequately keyed into the channel bottom to prevent possible undermining of the slope.
- (e) The enclosed plan has been stamped by a professional engineer.

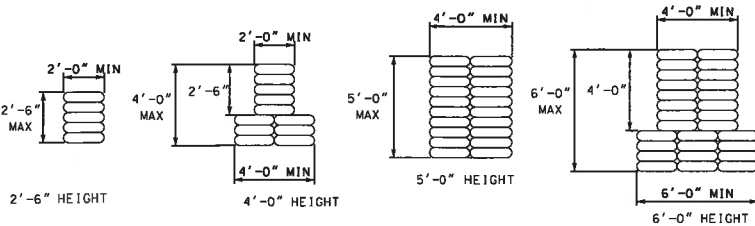
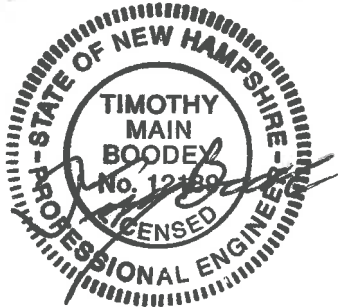
RIPRAP GRADATION

D15 < 16"
D50 < 21"
D100 < 36"

RRIPRAP	
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)	
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	
TEMPORARY IMPACTS	



SECTION A-A
NOT TO SCALE



COFFERDAM DETAILS
NOT TO SCALE

WETLANDS DELINEATED BY SARAH LARGE AUGUST 2018

STATE OF NEW HAMPSHIRE										
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE										
TOWN	MONROE		BRIDGE NO.		125/113		STATE PROJECT		42411	
LOCATION NH 135 OVER ROARING BROOK										
WETLAND IMPACTS								BRIDGE SHEET		
REVISIONS AFTER PROPOSAL					BY		DATE		1 OF 3	
			DESIGNED		DBL		3/13/19		CHECKED	
			DRAWN		DBL		3/13/19		CHECKED	
			QUANTITIES						CHECKED	
			ISSUE DATE				FISCAL YEAR		CREW	
			REV. DATE				2019		10	
									SHEET NO.	
									1	
									TOTAL SHEETS	
									3	

WETLAND IMPACTS
SCALE: 1" = 20'-0"



Monroe 125/113

WETLAND IMPACT SUMMARY											
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA IMPACTS						LINEAR STREAM IMPACTS FOR MITIGATION		
			PERMANENT				TEMPORARY		PERMANENT		
			N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)				BANK LEFT	BANK RIGHT	CHANNEL
			SF	LF	SF	LF					
1	R2RB1	A	49	27			844	62			27
2	BANK	B					202	27			
2	BANK	C			352	24	60	4		24	
		D									
		E									
		F									
		G									
		H									
		I									
		J									
		K									
		L									
TOTAL			49	27	352	24	1106	93	0	24	27

PERMANENT IMPACTS: 401 SF

TEMPORARY IMPACTS: 1106 SF

TOTAL IMPACTS: 1507 SF

SUBTOTALS		PERMANENT				TEMPORARY	
		N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)			
CLASS	DESCRIPTION	SF	LF	SF	LF	SF	LF
R2RB1	RIVERINE	49	27	0	0	844	62
BANK	BANK	0	0	352	24	262	31
		0	0	0	0	0	0
		0	0	0	0	0	0
		0	0	0	0	0	0

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN MONROE BRIDGE NO. 125/113 STATE PROJECT 42411

LOCATION NH 135 OVER ROARING BROOK

WETLAND IMPACTS

REVISIONS AFTER PROPOSAL

DESIGNED DBL 3/13/19 CHECKED

DRAWN DBL 3/13/19 CHECKED

QUANTITIES

ISSUE DATE

REV. DATE

BY DATE

BY DATE

3/13/19

3/13/19

CHECKED

CHECKED

2019

10

2

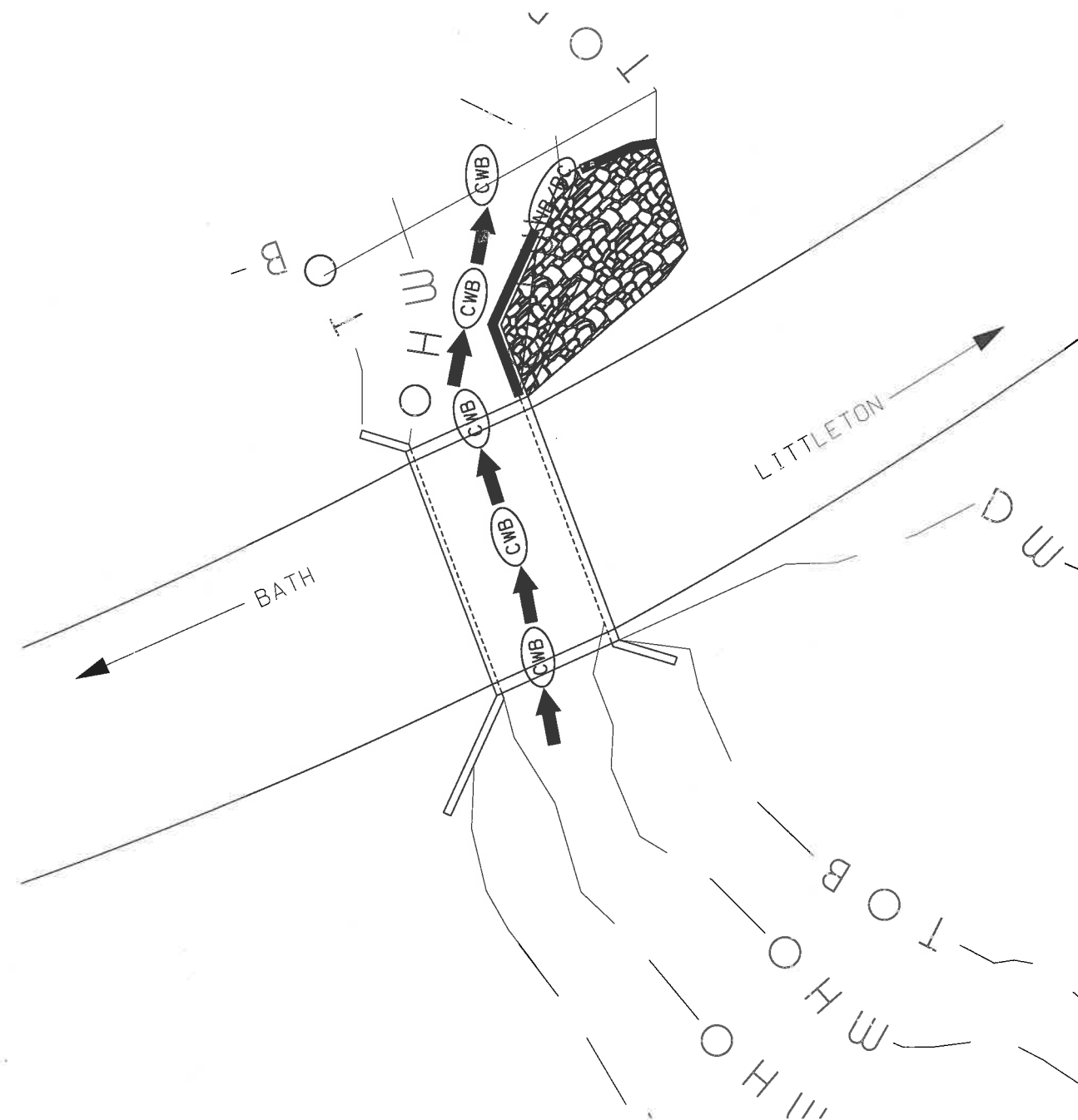
BRIDGE SHEET




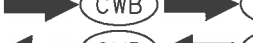
2 OF 3

FILE NUMBER
MONROE
125/113

TOTAL SHEETS
3

SHEET SCALE



EROSION CONTROL PLAN LEGEND	
	PERIMETER CONTROL
	SILT FENCE
	EROSION CONTROL MIX BERM
	EROSION CONTROL MIX SOX
	TURBIDITY CURTAIN
	SHEET PILE
	COFFER DAM
	NATURAL BUFFER/PERIMETER CONTROL
	SILT FENCE
	EROSION CONTROL MIX BERM
	EROSION CONTROL MIX SOX
	TURBIDITY CURTAIN
	SHEET PILE
	COFFER DAM
	CHANNEL PROTECTION
	STONE CHECK DAMS
	STRAW WATTLES
	CHANNEL MATTING
	CLASS D EROSION STONE
	CLASS C STONE
	CLEAN WATER BYPASS
	PUMP THROUGH PIPE
	DRAIN THROUGH PIPE OR CHANNEL

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE									
TOWN	MONROE	BRIDGE NO.	125/113	STATE PROJECT	42411				
LOCATION NH 135 OVER ROARING BROOK									
EROSION CONTROL PLANS									
REVISIONS AFTER PROPOSAL		BY	DATE	BY	DATE	BRIDGE SHEET			
		DESIGNED	DBL	3/13/19	CHECKED	3 OF 3			
		DRAWN	DBL	3/13/19	CHECKED	FILE NUMBER			
		QUANTITIES		CHECKED		MONROE			
		ISSUE DATE		FISCAL YEAR	2019	CREW	10	SHEET NO.	3
		REV. DATE							TOTAL SHEETS
									3

SHEET SCALE
AS NOTED